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| 09/725,933      | 11/30/2000  | Kyu Dong Kim         | 342310.0005         | 2877             |

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| EXAMINER |
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3623

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/725,933

Applicant(s)

KIM ET AL.

Examiner

Kalyan K. Deshpande

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 31 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-43 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-43 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 31, 2005 has been entered.

### ***Introduction***

2. The following is a non-final office action in response to the communications received on November 30, 2000. Claims 1-43 are now pending in this application.

### ***Information Disclosure Statement***

3. The examiner has reviewed the patents and articles supplied in the Information Disclosure Statements (IDS) provided on October 30, 2002.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Art Unit: 3623

5. Claims 1-13, 19-20, 24, 26, and 28-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Bacon et al. (U.S. Patent No. 6430538).

As per claim 1, Bacon teaches:

A workflow management system, for automating a business processes comprising:

A computer (see column 4 lines 15-21; where the hardware of the workflow system are listed. A server (computer) is included in the list.);

An administrator executable by the computer, wherein the administrator manages automating the business process and comprises an organization manager, a role/group manager, a process manager, and a folder manager (see column 4 line 38 – column 5 line14; where the application services are executed by the server. The application contains agents that are responsible for automating business processes. The system also incorporates LDAP services and certificate services for organization management and role/group management. The system also uses a database to store process definitions. This database serves as a process manager and folder manager. A folder manager contains information regarding business processes (see Specification page 11).);

A process designer executable by the computer, wherein the process designer determines flows and properties of the business process and defines an activity that is performed in the business process (see column 4 lines 22-28; where a process definition tool is used to create and design workflows. The

workflows consist of a plurality of activities and these activities are defined by the process definition tool.);

A database accessible by both the administrator and the process designer, wherein the database stores organization information, authority information, and folder information (see column 4 line 66 – column 5 line 22; where a database stores process information (folder information) and an LDAP database stores directory and organization information. The certification services contain and control authentication information.);

A process engine executable by the computer, wherein the process engine executes the business process and allocates the activity to the participant, monitors start and end of the activity, and/or interfaces with the database, another workflow engine, and/or a business application program (see column 4 lines 22-38, column 6 line 48 – column 8 line 40, and column 11 line 45 – column 12 line 60; where a process engine executes business processes and schedules activities to clients. The process definition may include information identifying process start and end requirements.);

A web client, that interfaces with the process engine, the another workflow engine, and/or the business application program, and wherein the web client permits a user to interact with the system (see column 6 line 48 – column 8 line 40; where the workflow management system has a web interface allowing clients (users) to interact with the system.); and

A form generator executable by the computer, wherein the form generator designs and operates an electronic form related to the business process, and wherein the form generator interfaces with the database, the process designer, the process engine, the web client, and/or the business application program (see column 4 lines 21-65 and column 6 line 48 – column 8 line 40; where the system includes a browser and a java applet. The java applet allows for the user of graphic objects, data input cells, and access to the database. A form generator supports the various kinds of graphic objects, data input cells, graphic signatures, automatic calculations, database access and programming scripts (see Specification page 16). The java applet is a form generator.).

As per claim 2, Bacon teaches:

The workflow management system of claim 1,

Wherein the organization manager creates, deletes, and maintains information about a department associated with the business process (see column 5 lines 1-22; where LDAP services control directory services.);

Wherein the role/group manager creates, deletes, and maintains information about a role and a user group associated with the business process (see column 5 lines 1-22; where LDAP services control director services.);

Wherein the authority manager creates, deletes, and maintains information about an authority that can access the business process application program, and wherein the authority manager further allocates the authority information to the information about the role, the group and a member of at least one of the

Art Unit: 3623

department and the user group (see column 5 lines 1-22; where LDAP services and certificate services together provide directory information and authority information and access to the system.); and

Wherein the folder manager creates, deletes, and maintains information about a folder (see column 4 line 22 – column 5 line 13; where the system uses a database to store process definitions. This database serves as a process manager and folder manager. A folder manager contains information regarding business processes (see Specification page 11).

As per claim 3, Bacon teaches:

The workflow management system of claim 2, further comprising an object manager, wherein the object manager interfaces the administrator with the database (see column 5 line 23 – column 6 line 3; where an object database management group is used to connect the administrator to the database.).

As per claim 4, Bacon teaches:

The workflow management system of claim 3, wherein the database further comprises:

An organization database (see column 4 line 66 – column 5 line 22; where a database stores process information (folder information) and an LDAP database stores directory and organization information. The certification services contain and control authentication information.);

Authority database (see column 4 line 66 – column 5 line 22; where a database stores process information (folder information) and an LDAP database

Art Unit: 3623

stores directory and organization information. The certification services contain and control authentication information.); and

A folder database (see column 4 line 66 – column 5 line 22; where a database stores process information (folder information) and an LDAP database stores directory and organization information. The certification services contain and control authentication information.).

As per claim 5, Bacon teaches:

The workflow management system of claim 1, wherein the process designer comprises:

A graphic designer executable by the computer that creates and designs and activity and the business process using a graphical user interfaces (see column 4 lines 22-28; where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool.); and

A property designer executable by the computer that defines a property of the activity to be executed in the business process (see column 4 lines 22-28; where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool.).

As per claim 6, Bacon teaches:

The workflow management system of claim 5, wherein the property designer further comprises and object manager that interfaces the designer with the database



Art Unit: 3623

(see column 5 line 23 – column 6 line 3; where an object database management group is used to connect the application services to the database, including the process definition tool.).

As per claim 7, Bacon teaches:

The workflow management system of claim 6, wherein the database comprises:

A process definition folder that contains information related to the business process modeling (see column 4 line 22 – column 5 line 22; where a process definition tool creates process definitions based on business process modeling and stores the workflows in a database.);

A data folder that contains data generated by the business process execution (see column 4 line 22 – column 5 line 22; where a process definition tool creates process definitions based on business process modeling and stores the workflows in a database.); and

an organization folder (see column 4 line 66 – column 5 line 22; where a database stores process information (folder information) and an LDAP database stores directory and organization information. The certification services contain and control authentication information.).

As per claim 8, Bacon teaches:

The workflow management system of claim 1, wherein the web client further comprises:

A worklist handler (see column 6 line 48 – column 8 line 40; where the server schedules an activity for a client. The scheduled activity is sent to the client's in-

box. The activity is also part of the process definition which is stored in the application's database. A worklist handler is a list of activities scheduled to a participant of the system (see Specification page 8.);

A workitem handler (see column 4 lines 58 - 65; where an agent is responsible for automatically implementing a given activity. A workitem handler is a handler that automatically executes activities (see Specification page 9). Therefore, a workitem handler and an agent are the same.); and

A process monitor (see column 4 lines 38-65; where the server includes engines that determine the status of the process.).

As per claim 9, Bacon teaches:

The workflow management system of claim 8, wherein the worklist handler maintains a work list for a user (see column 6 line 48 – column 8 line 40; where the server schedules an activity for a client. The scheduled activity is sent to the client's in-box. The activity is also part of the process definition which is stored in the application's database. A worklist handler is a list of activities scheduled to a participant of the system (see Specification page 8).).

As per claim 10, Bacon teaches:

The workflow management system of claim 9, wherein the workitem handler supports execution of the business process (see column 4 lines 58 - 65; where an agent is responsible for automatically implementing a given activity. A workitem handler is a handler that automatically executes activities (see Specification page 9). Therefore, a workitem handler and an agent are the same.).

Art Unit: 3623

As per claim 11, Bacon teaches:

The workflow management system of claim 10, wherein the process monitor checks status of the business process (see column 4 lines 38-65; where the server includes engines that determine the status of the process.).

As per claim 12, Bacon teaches:

The workflow management system of claim 11, wherein the process monitor further checks a history of the business process and current progress of the business process (see column 4 lines 38-65; where the server includes engines that determine the status of the process. The server determines which activities has been completed and which activities are ready to be started.).

As per claim 13, Bacon teaches:

The workflow management system of claim 12, wherein the process monitor further monitors resource utilization (see column 4 lines 38-65; where the server includes engines that determine the status of the process. These status updates are received by monitoring various resources, including agents and clients. The server determines which activities has been completed and which activities are ready to be started. Upon determination that an activity can be started, the server routes an activity to the appropriate resources for performance.).

As per claim 19, Bacon teaches:

The workflow management system of claim 5, wherein the property designer creates, deletes, and maintains a business rule associated with the business process (see column 4 lines 22-28 and column 11 line 46 – column 12 line 60;

Art Unit: 3623

where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool. The workflow items can have rules associated with them as described by the sample code provided.).

As per claim 20, Bacon teaches:

The workflow management system of claim 19, wherein the business rule includes information that defines a term associated with the business process, defines a condition associated with the business process, and/or defines a transition path to be used when the activity is completed (see column 4 lines 22-28 and column 11 line 46 – column 12 line 60; where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool. The workflow items can have rules associated with them as described by the sample code provided.).

As per claim 24, Bacon teaches:

The workflow management system of claim 1, wherein the process engine comprises:

An interface agent that interchanges information about a status of the business process with other process engines (see column 4 lines 38-65; where the server includes engines that determine the status of the process.).

A request manager that receives requests from the user, directs the process engine to handle the requests, and return results to the user (see column 6 line

48 – column 7 line 25; where the server handles all of the client requests and returns the appropriate information to the clients.);

A dispatcher that retrieves and executes the requests and stores results in the database (see column 6 line 48 – column 7 line 25; where the server handles all of the client requests and returns the appropriate information to the clients. The dispatcher executes the client requests (see Specification page 34). This is the same as the server executing client requests.);

A scheduler (see column 4 lines 38-65; where the server schedules activities based on available resources and readiness of the activity to be performed.);

A security manager that controls a certification process with an outside certification server (see column 5 lines 15-22; where certification services provides certificates used for authentication.); and

A database broker that interfaces with the process engine and the database (see column 5 line 23 – column 6 line 3; where an object database management group is used to connect the administrator to the database.).

As per claim 26, Bacon teaches:

The workflow management system of claim 24, wherein the scheduler manages a deadline of the activity and/or a waiting state of the activity (see column 4 lines 38-65; where the server includes engines that determine the status of the process. Only upon determination that the activity is ready to be performed does the server move the process forward. Until then, the process is in a waiting state.).

As per claim 28, Bacon teaches:

The workflow management system of claim 25, wherein the activity transits among the states according to a business rule (see column 4 lines 39-65; where the server determines which resources to schedule the activity to. This is done in accordance to the process definition.).

As per claim 29, Bacon teaches:

The workflow management system of claim 28, wherein the process engine controls the workflow using a transition count to keep the transitions between activity states consistent with the business rule (see column 9 line 1 – column 11 line 45; where the process engine controls the workflow as it progresses between work items. The transition count is a method to determine to validate the business process is flowing according to the business rule (see Specification page 37). The Bacon system uses an expression to determine the corresponding work item. The decision agent renders a Boolean value of true (1) or false (0) based on the expression. This ensures that the processes is flowing within the rules of the process definition.).

As per claim 30, Bacon teaches:

The workflow management system of claim 29, wherein the process engine sets to zero the transition counts of all the transitions that can be processed in a forward direction from the activity, when the activity is started (see column 9 line 1 – column 11 line 45; where the process engine controls the workflow as it progresses between work items. The transition count is a method to determine to validate the business process is flowing according to the business rule (see Specification page 37). The

Bacon system uses an expression to determine the corresponding work item. The decision agent renders a Boolean value of true (1) or false (0) based on the expression. This ensures that the processes are flowing within the rules of the process definition.).

As per claim 31, Bacon teaches:

The workflow management system of claim 30, wherein the process engine further sets to one the transition counts of the transitions stemming from execution of the activity, when the activity is completed (see column 9 line 1 – column 11 line 45; where the process engine controls the workflow as it progresses between work items. The transition count is a method to determine to validate the business process is flowing according to the business rule (see Specification page 37). The Bacon system uses an expression to determine the corresponding work item. The decision agent renders a Boolean value of true (1) or false (0) based on the expression. This ensures that the processes are flowing within the rules of the process definition.).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3623

7. Claims 14, 16, 17, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (U.S. Patent No. 6430538).

As per claim 14, Bacon teaches:

The workflow management system of claim 2, wherein the organization manager further creates, deletes and maintains information regarding client information as dictated by the LDAP directory services (see column 5 lines 8 – 22; where LDAP services maintain directory services for the organization.).

Bacon fails to teach:

i) information about relationships between the department, rank of a member in the department and/or user group, and ii) information regarding the member in the department and/or user group.

It is old and well-known in the art to develop an organization chart that maps the relationships between all participating members in an organization. The advantage of developing an organization chart is that such data clearly defines responsibilities of each member and defines who is ultimately responsible for each activity. Another advantage to defining an organization chart is to determine access and privilege levels for each member using the system. Thus, a supervisor can easily see the activities assigned to his subordinates. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to develop an organization chart containing information regarding the relationship between the department and rank of a member in a department and incorporate this information to the Bacon system in order to clearly



Art Unit: 3623

define the responsibilities of each participating member and determine ultimately who is responsible for each activity.

As per claim 16, Bacon teaches:

The workflow system of claim 2, wherein the LDAP directory services contain member, role and user group information (see column 5 lines 8 – 22; where LDAP services maintain directory services for the organization.).

Bacon fails to teach:

wherein the role/group manager allocates the member information to the role information and the user group information.

It is old and well-known in the art for a group manager to allocate member information to role and user group information. The advantage of allowing a group manager to allocate member information is that management of the workflow process have clear information as to the skills necessary to perform the activity and the skills of the members of their organization. Thus a group manager would be the ideal person to allocate the member information to the role information. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to assign a group manager the responsibility of allocating the member information to the role information in order to have the most qualified person in the organization to perform this activity actually perform the activity.

As per claim 17, Bacon teaches:

The workflow management system of claim 2, where in the LDAP directory services and certificate services contain information regarding the role, group and

Art Unit: 3623

member of the department (see column 5 lines 8 – 22; where LDAP services maintain directory services for the organization.).

Bacon fails to teach:

the authority manager allocates the authority information to information about the role, the group and the member of the department and/or the user group.

It is old and well-known in the art for an authority manager to allocate authority information to role and user group information. The advantage of allowing an authority manager to allocate authority information is that management of the workflow process have clear information as to the skills necessary to perform the activity and the skills of the members of their organization. Thus an authority manager would be the ideal person to allocate the authority information to the role information. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to assign an authority manager the responsibility of allocating the authority information to the role information in order to have the most qualified person in the organization to perform this activity actually perform the activity.

As per claim 25, Bacon teaches:

The workflow management system of claim 24, wherein the process engine allocates the activity to the participant and a status of the activity is monitored by the process engine (see column 4 lines 38-65; where the server includes engines that determine the status of the process. These status updates are received by monitoring various resources, including agents and clients. The server determines which activities have been completed and which activities are ready to be started.

Upon determination that an activity can be started, the server routes an activity to the appropriate resources for performance.).

Bacon fails to teach:

The workflow management system of claim 24, wherein the process engine allocates the activity to the participant and a status the activity comprises one of a state selected from the group consisting of: an initial state; a waiting state; a dead state; a running state; a suspended state; a completed state; a terminated state; an error state; and an overdue state.

Bacon teaches determining the status of a process in a workflow management system. Bacon does not expressly teach the specific data recited in claim 25; however, these differences are only found in the non-functional descriptive material and are not functionally involved in the steps recited nor do they alter the recited structural elements. The recited method steps would be performed the same regardless of the specific data. Further, the structural elements remain the same regardless of the specific data. Thus, this descriptive material will not distinguish the claimed invention from the prior art in terms of patentability, *see In re Gulack*, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed. Cir. 1983); *In re Lowry*, 32 F.3d 1579, 32 USPQ2d 1031 (Fed. Cir. 1994); *MPEP* § 2106.

As per claim 27, Bacon teaches:

The workflow management system of claim 24, where in security mechanisms are provided to ensure authentic data (see column 8 lines 44-67; where security

mechanisms are provided to protect against eavesdropping and to ensure work items are authentic.).

Bacon fails to teach:

the security manager further encodes and decodes information.

It is old and well-known in the art for a security manager to encode and decode information. The advantage of encoding and decoding information is that it renders data ready to be transferred over the internet. Encoding and decoding can also provide an additional layer of security. It would have been obvious, at the time of the invention, for one of ordinary skill in the art to incorporate encoding and decoding scripts to the Bacon system in order to render data ready to transfer of the internet and provide an additional layer of security to the data.

As per claim 32, Bacon teaches:

A method for automating a business process, the method comprising steps of:

Defining an activity that is performed in the business process (see column 4 lines 22-28; where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool.);

Accessing, from a database, organization information, authority information, and/or folder information relating to the business process (see column 4 line 66 – column 5 line 22; where a database stores process information (folder information) and an LDAP database stores directory and organization

Art Unit: 3623

information. The certification services contain and control authentication information.);

Executing the business process, wherein the step of executing the business process includes allocating the activity to a participant, and designing and creating an electronic form related to the business process (see column 4 lines 22-38, column 6 line 48 – column 8 line 40, and column 11 line 45 – column 12 line 60; where a process engine executes business processes and schedules activities to clients. The process definition may include information identifying process start and end requirements.); and

Monitoring the business process, wherein the step of monitoring the business process comprises monitoring a start and end of the activity, facilitating storing a result of the activity, and/or interfacing with a workflow program and/or business application program (see column 4 lines 38-65; where the server includes engines that determine the status of the process. The server determines which activities have been completed and which activities are ready to be started.).

Bacon fails to teach:

Modeling the business process, wherein the step of modeling includes generating an organization chart;

Claim 32 recites limitations already addressed by the rejection of claim 14, 16, and 17; therefore the same rejection applies to this claim.

As per claim 33, Bacon fails to teach:

Mapping at least one departments, members, member titles and member roles to generating the organization chart;

Creating a role; and

Allocating an authority to the role;

Claim 33 recites limitations already addressed by the rejection of claims 14, 16, and 17; therefore the same rejection applies to this claim.

As per claim 34, Bacon fails to teach:

Mapping at least one of departments, members, member titles, and member roles to generate the organization chart;

Creating a group of human resources; and

Allocating an authority to the group of human resources.

Claim 34 recites the limitation "Mapping at least one of departments, members, member titles, and member roles to generate the organization chart". This limitation is already addressed by the rejection of claims 14, 16, 17, and 33; therefore the same rejection applies.

It is old and well-known in the art to create a group of human resources and to allocate organizational authority to the human resources group. The traditional functions of human resource groups include creation of roles, job descriptions, and providing authorization information regarding the members to necessary work groups. The advantages of allocating the human resources group this authority are that all member information will be in a consolidated area and will be confidential from other groups. It would have been obvious, at the time of the invention, to one of ordinary skill

Art Unit: 3623

in the art to create a human resources group and allocate an authority to this group in order to consolidate member information and maintain this information in confidentiality from other work groups.

As per claim 35, Bacon teaches:

The method of claim 32, wherein the step of designing a process further comprises:

Identifying an activity to be executed (see column 4 lines 22-28; where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool.); and

Allocating a property to the activity (see column 4 lines 22-28; where a process definition tool is used to create and design workflows. The workflows consist of a plurality of activities and these activities are defined by the process definition tool. Specific properties to the activities, such as start and end times, can be associated to the activities.).

As per claim 36, Bacon teaches:

The method of claim 32, wherein the step of designing a process further comprises:

A start activity that starts a process (see column 6 lines 48-65 and column 9 lines 1-13; where the server sends the client a work item to initiate the process. Furthermore, workflows are defined by start points and end points.);

A normal activity that involves an intervention by a participant(see column 6 lines 48-65; where the server sends the client a work item to initiate the process.);

A wait activity (see column 6 line 48 – column 7 line 9; where the process waits until the client selects the work item. Once the client selects the item, the process is ready to begin.);

A mail activity(see column 6 lines 48-65; where the server sends the client a work item to initiate the process. The client receives the work item in his in-box.);

An SQL activity that accesses an application database (column 7 lines 10-25; where the application queries a database (using SQL) to retrieved client requested objects.);

A sub-process activity that comprises a plurality of separate activities (see column 8 lines 44-67; where distributed subflows are used.);

An agent activity that automatically activates a program (see column 4 lines 58 - 65; where an agent is responsible for automatically implementing a given activity.);

A connector activity (see column 5 line 23 – column 6 line 3; where an object database management group is used to connect the application services to the database, including the process definition tool.); and

An end activity that represents an end of the process (see column 8 lines 16-40 and column 9 lines 1-13; where a step is necessary to end the activity. The flow engine determines if there is a subsequent step for the process and if not,



ends the process. Furthermore, workflows are defined with start points and end points.).

As per claim 37, Bacon teaches:

The method of claim 35, wherein the property comprises:

Participant information that describes an individual that executes the activity (see column 9 lines 14-67; where personal subflows are specifically assigned to a single actor known actor.);

Application information that describes a business application to be used by the individual to execute the activity (see column 10 lines 1-16; where the server loads the appropriate application within the java applet for the client to execute. In another frame, the server can load controls for the user to navigate.);

Post-condition information that determines when the activity is completed (see column 10 lines 17-40; where the server uses a decision point agent to determine if the activity is complete.);

A schedule information that describes the planning of the activity (see column 4 lines 22-57 and column 9 lines 51-67; where the appropriate work item is routed to the defined participant. The activity planning is done with the process definition tool.);

Deadline information that describes timing for executing the activity (see column 4 lines 22-57 and column 9 lines 1-19; where each activity has a start point and an end point. The process definition tool can also associated start and end times to activities.);

Sub-process information that describes a location and an option of the sub-process activity (see column 9 line 1 – column 10 line 54; where sub-process information is determined as personal subflows. The personal subflows have start points and end points with handlers to return the personal subflow back to the business process flow.);

Parameter information that defines a value necessary for executing a program in an agent activity (see column 10 lines 14-40; where a decision agent uses parameters in the work item to determine if the activity is complete and the server determines what the subsequent activity should be.);

Mail-to information that determines a recipient of email in the mail activity (see column 6 lines 48-67 and column 9 lines 51-67; where the server mails the client the next work item.);

Mail content information that represents the content of email in the mail activity (see column 6 lines 48-67 and column 9 lines 51-67; where the server mails the client the next work item.);

General information that shows a name and description of the activity (see column 10 lines 17-27; where a naming convention names each work item in order to identify the stage of the process.);

Transition condition information that represents conditions for an input transition and an output transition (column 10 lines 1-40; where transition information is determined. The condition to transfer a work item from one activity

to the next is determined by a Boolean value of true or false. If this condition is satisfied, the work item is routed to the subsequent activity.); and

Icon information to display an icon on a graphical user interface (see column 4 lines 21-38; where the process definition tool uses a graphical user interface (GUI) to develop the process workflow. The GUI contains icons that represent different steps and activities for the developer to use.).

As per claim 38, Bacon teaches:

The method of claim 35, wherein the participant can comprise one of or any combination of a user, a department and the role (see column 5 lines 23-48; where work items can be associated with several participants, including a work group, for load balancing or group functions.).

As per claim 39, Bacon teaches:

The method of claim 38, wherein the participant can be a manager of a participant (see column 5 lines 23-48; where work items can be associated with several participants, including a work group, for load balancing or group functions.).

As per claim 40, Bacon teaches:

The method of claim 38, wherein the participant can be a peer of the participant (see column 5 lines 23-48; where work items can be associated with several participants, including a work group, for load balancing or group functions.).

As per claim 41, Bacon teaches:

The method of claim 38, wherein the participant can be a department of the participant (see column 5 lines 23-48; where work items can be associated with several participants, including a work group, for load balancing or group functions.).

As per claim 42, Bacon teaches:

The method of claim 38, wherein activity is allocated based on a workload of the participants (see column 5 lines 23-48; where work items can be associated with several participants, including a work group, for load balancing or group functions.).

As per claim 43, Bacon teaches:

The method of claim 32, wherein generating an organization chart comprises mapping information about a department, a member name, a member title, and a member role.

Claim 43 recites limitations already addressed by the rejection of claims 14, 16, and 17; therefore the same rejection applies to this claim.

8. Claims 15 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bacon et al. (U.S Patent No. 6430538) and further in view of Berg et al. (U.S. Patent No. 5999911).

As per claim 15, Bacon fails to teach:

The organization manager further registers a signature of each member of the department and/or user group.

Berg teaches:

The organization manager further registers a signature of each member of the department and/or user group (see column 21 lines 58-67; where the workflow

Art Unit: 3623

manager stamps the username and comment to uniquely identify each create instances.).

Bacon teaches a workflow management system that allows for a graphical design of the workflow and a web interface for clients to use. Berg also teaches a workflow system that allows for a graphical design of the workflow and provides real time status of the workflow. The advantage of registering a signature is that it provides a unique identifier for items created by that user. It would have been obvious, at the time of the invention, to combine these references because they disclose inventions in the same art and attempt to improve the management of workflow within an organization. Therefore, it would have been obvious, at the time of the invention, to combine the signature feature of the Berg system to the Bacon system in order to provide unique identifiers to the system.

As per claim 21, Bacon fails to teach:

The process designer further comprises a check-out table.

Berg teaches:

The process designer further comprises a check-out table (see column 7 line 63 – column 8 line 9; where concurrent access to the workflow instance database is subject to a system of locking files. If a user is working on a workflow instance file, the system marks the file as lock so that no other user can modify the file while another user is modifying it.).

The advantages of using a file locking system are that files are not overwritten by other users while a user is modifying that file. A file locking system also provides a

Art Unit: 3623

history of modifications to the file. It would have been obvious, at the time of the invention, to incorporate the file locking feature of the Berg system to the Bacon system in order to prevent workflow definitions from being overwritten by other users while a user is modifying that file.

As per claim 22, Bacon fails to teach:

The check-out table contains information on a process model currently checked-out by a user.

Berg teaches:

The check-out table contains information on a process model currently checked out by a user (see column 7 line 63 – column 8 line 9; where concurrent access to the workflow instance database is subject to a system of locking files. If a user is working on a workflow instance file, the system marks the file as lock so that no other user can modify the file while another user is modifying it.).

Claim 22 recites limitations already addressed by the rejection of claim 21; therefore the same rejection applies to this claim.

As per claim 23, Bacon fails to teach:

The system keeps a currently checked-out process model from being simultaneously checked-out by another user by referring to the check-out table.

Berg teaches:

The system keeps a currently checked out process model from being simultaneously checked-out by another user by referring to the check-out table (see column 7 line 63 – column 8 line 9; where concurrent access to the workflow

instance database is subject to a system of locking files. If a user is working on a workflow instance file, the system marks the file as lock so that no other user can modify the file while another user is modifying it.).

Claim 23 recites limitations already addressed by the rejection of claim 21; therefore the same rejection applies to this claim.

### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following are pertinent to the current invention, though not relied upon:

Bengston (U.S. Patent No. 6728947) teaches a system and apparatus for automatically executing process steps by processing devices transmitted, over a communication channel, using a workflow file to specify the process steps.

Du et al. (U.S. Patent No. 6078982) teaches A system for allowing consistent execution of a workflow process in a computer-enabled workflow management system is described.

Boden et al. (U.S. Patent No. 5930512) teaches an apparatus and computer implemented method for process modeling using both a web server and a workflow server in process definition.

Saito et al. (U.S. Patent No. 5867824) teaches a workflow system comprising a plurality of workflow subsystems connected to a LAN, these workflow subsystems being composed of servers and clients, and provides a workflow system which permits an integrated management of the definitions of the business processes placed under

Art Unit: 3623

decentralized management, through the server managing shipping documents, business processes describing shipping routes of shipping documents in the subsystem, and business process connection data to connect the business processes.

Basu et al. (Basu, Amit; Blanning, Robert W.; "A Formal Approach to Workflow Analysis", *Information Systems Research*, March 2000, pp. 17-36) teaches a method to implement workflow system by process redefinition and reengineering.

Leymann et al. (Leymann, F.; Roller, D.; "Workflow-Based Applications", *IBM Systems Journal*, 1997, pp. 102-123) teaches a method for reconstructing workflow management systems based on new or modified business processes.

Zhao et al. (Zhao, J. Leon; Kumar, Akhil; Stohr, Edward A.; "Workflow-centric Information Distribution Through E-mail", *Journal of Management Information Systems*, Winter 2000, pp. 45-72) teaches distribution of information, including new releases and memos, through a workflow system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalyan K. Deshpande whose telephone number is (571) 272-5880. The examiner can normally be reached on M-F 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3623

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